CLAIMS

What is claimed is:

1. A method for connecting a first end of an optical fiber to a laser module including the steps of:

a. positioning a laser transmitter generally adjacent one of a first end and a second end of the optical fiber;

b. positioning a laser receiver at the other of the first end and the second end of the optical fiber;

c. transmitting an optical signal from the laser transmitter through the optical fiber and receiving the optical signal at the laser receiver;

d. controlling movement with a computer of the first end of the optical fiber relative to one of the laser transmitter and the laser receiver during said step c);

e. monitoring the optical signal received by the laser receiver during said step d) with a light sensing system and the computer; and

f. determining an optimal position of the first end of the optical fiber based upon said step e).

2. The method of claim 1 further including the steps of:

Controlling movement of the first end of the optical fiber with the computer; and

Moving the first end of the optical fiber to the optimal position.

3. The method of claim 1 further including the step of securing the first end of the optical fiber at the optimal position.

4. The method of claim 3 further including the step of dispensing a liquid polymer on the first end to secure the first end at the optimal position.

5. The method of claim 4 further including the step of controlling the dispensing of the polymer with the computer.

6. The method of claim 5 further including the step of controlling with a computer a rapid cure system to cure the polymer to secure the first end at the optimal position.

7. The method of claim 3 wherein said step d) further includes the step of monitoring movement of the first end of the optical fiber relative to the laser transmitter.

8. A system for connecting a first end of an optical fiber to a first optical module including:

a. a second optical module generally adjacent a second end of the optical fiber, one of the first and second modules generating an electrical signal based upon an optical signal transferred between the first and second modules through the optical fiber; and

b. a computer receiving the electrical signal and controlling movement of the first end of the optical fiber to a first position relative to the first optical module based upon the electrical signal.

9. The system of claim 8 wherein the first optical module includes an optical transmitter and the second optical module is an optical receiver.

10. The system of claim 8 wherein the first optical module is an optical receiver and the second optical module is an optical transmitter.

11. The system of claim 8 further including means for attaching the first end of the optical fiber to the first optical module in the first position.

12. The system of claim 8 further including a spool about which the optical fiber is coiled.

13. The system of claim 12 wherein the computer controls rotation of the spool to sequentially unspool a desired length of the optical fiber for attachment to each of a plurality of the first optical module.

14. The system of claim 8 further including alignment means for moving the first end relative to the first optical module, the computer controlling the alignment means.

15. The system of claim 14 further including at least one positioning system controlled by the computer for moving the first end relative to the first optical module.

16. The system of claim 14, wherein said positioning system is movable in at least 3 axes.

17. The system of claim 15 further including a camera connected to the computer, the computer controlling movement of the first end of the optical fiber based upon visual information indicating the position of the first end of the optical fiber.

18. A system for connecting a first end of an optical fiber to a laser transmitter including:

a. a laser receiver optically coupled to a second end of the optical fiber and generating an electrical signal based upon an optical signal received by the laser receiver via the optical fiber; and

b. a computer controlling movement of the first end of the optical fiber relative to the laser transmitter based upon the electrical signal from the laser receiver.

19. The system of claim 17 wherein the computer controls movement of the first end of the optical fiber to an optimal position based upon the electrical signal from the laser receiver.

20. The system of claim 18 further including a liquid polymer dispensing system for selectively securing the first end at the optimal position adjacent the laser transmitter.

21. The system of claim 19 further including a camera sending visual information to the computer indicative of the position of the first end relative to the laser transmitter.

22. The system of claim 18, further including an atmosphere control system for controlling atmospheric conditions within the system.

23. The system of claim 18, wherein said optical fiber is coiled on a spool.

24. The system of claim 18, further including a cutting mechanism to cut said optical fiber into desired lengths.

25. The system of claim 18, further including a coiling mechanism for coiling said optical fiber.

26. The system of claim 18, wherein said laser transmitter is aligned relative to said electrical signal.